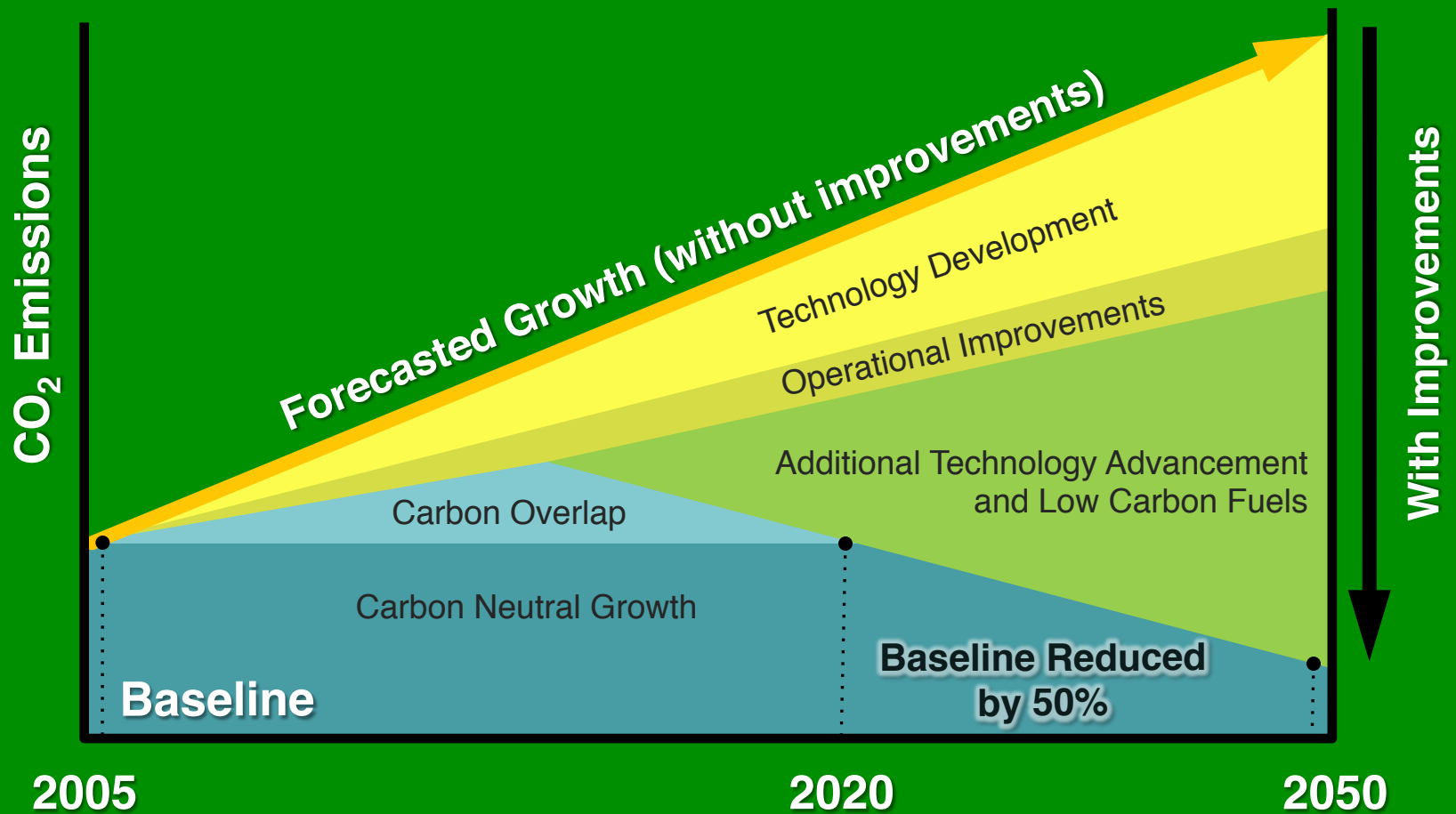


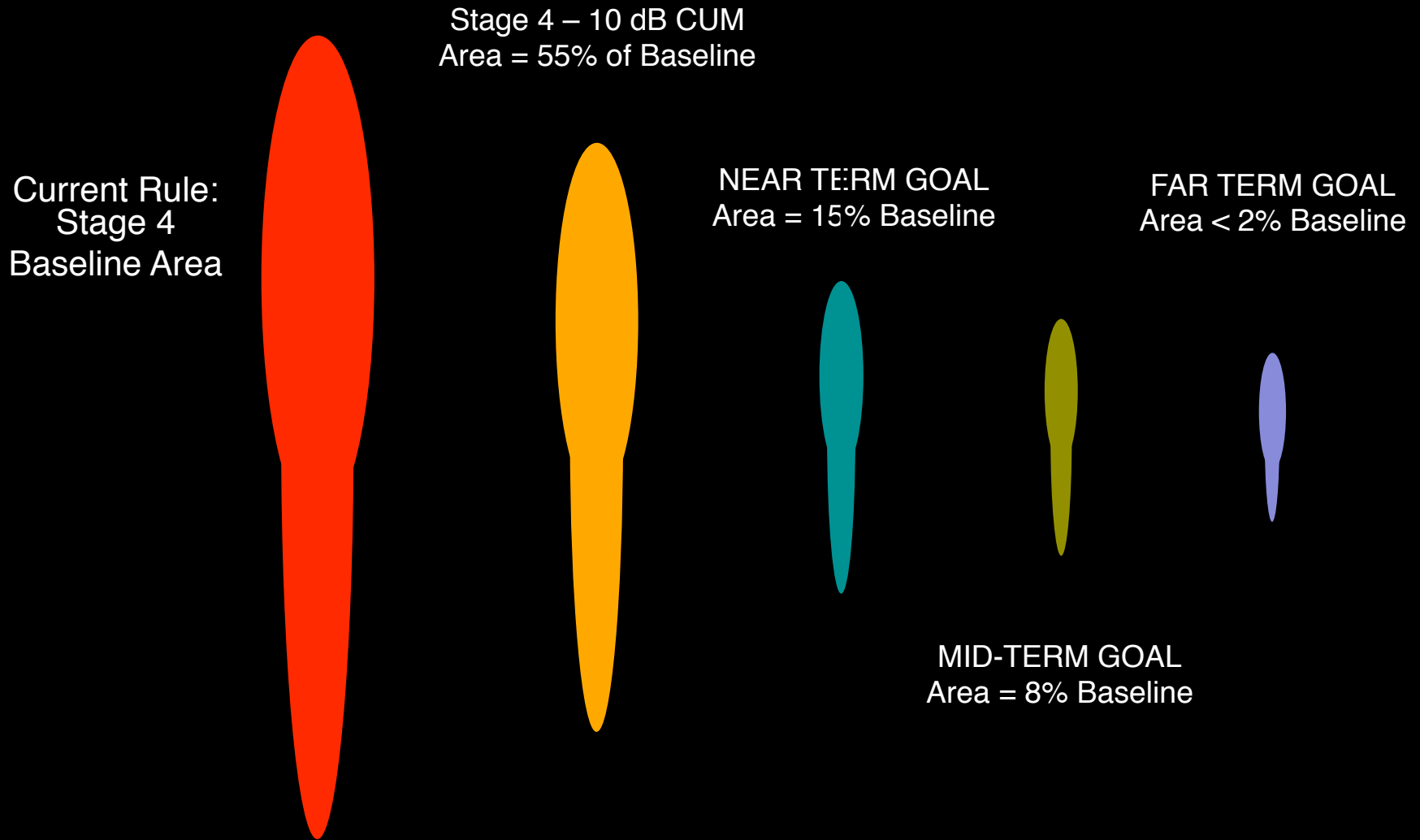
Challenges driving subsonic transport technology development

Fayette Collier, Ph.D., M.B.A.
Environmentally Responsible Aviation Project Manager

Challenge: Significant Carbon Emissions Reduction



Challenge: Significant Community Noise Reduction



“Community noise is considered the NUMBER 1 constraint to air transportation system growth” - FAA

US National Aeronautics R & D Plan

Technology Development Programs

CORNERS OF THE TRADE SPACE	N+1 2015 Timeframe	N+2 2020 Timeframe	N+3 2025 Timeframe
Noise (cum below Stage 4)	-32 dB	-42 dB	-72 dB*
LTO NO _x Emissions (Below CAEP 6)	-60%	-75%	better than -75%
Aircraft Fuel Burn/ Energy Use	-33%	-50%	better than -70%
	FAA CLEEN FOCUS	NASA FIXED WING FOCUS	
	NASA ERA FOCUS		
	AFRL AEROSAPCE SYSTEMS DIRECTORATE FOCUS		

